

ABSTRACT

In the present invention, without forming a rotational shaft (30) per se in an eccentric manner, the eccentric structure is provided to the whole structure including a ball bearing (50). Accordingly, in place of cutting a side of the rotational shaft (30), the eccentric ball bearing (50) is joined to a shaft portion of the straight rotational shaft (30) so as to obtain an eccentric portion. That is, the eccentric portion is constituted of the shaft portion which has an axis aligned with an axis of the rotational shaft (30) and the eccentric ball bearing (50) which is joined to the shaft portion. As the eccentric ball bearing, it is optimum to adopt a mode in which an inner side thereof having a smaller diameter is formed in an eccentric manner. The eccentric ball bearing (50) is constituted of an inner lace (52) which is arranged eccentric with respect to the axis of the rotational shaft (30), an outer lace (54) which surrounds an outside of the inner lace (52) and balls (55) which are supported between the outer lace (54) and the inner lace (52).